

We Claim:

1. An isolated antibody directed against a  
*Neisseria meningitidis* serogroup B capsular  
5 polysaccharide derivative, wherein said antibody is not  
autoreactive.

2. The antibody of claim 1 wherein said  
antibody does not cross-react with *Neisseria meningitidis*  
10 serogroup B capsular polysaccharide (MenB PS) in an  
ELISA.

3. The antibody of claim 1 wherein said  
antibody displays functional activity against a *Neisseria*  
15 *meningitidis* serogroup B organism.

4. The antibody of claim 1 wherein said  
antibody is a monoclonal antibody.

20 5. A unique *Neisseria meningitidis* serogroup  
B epitope capable of being bound by the antibody of claim  
1.

6. A unique *Neisseria meningitidis* serogroup  
25 B epitope capable of being bound by the antibody of claim  
2.

7. A unique *Neisseria meningitidis* serogroup  
B epitope capable of being bound by the antibody of claim  
30 3.

8. A unique *Neisseria meningitidis* serogroup  
B epitope capable of being bound by the antibody of claim  
4.  
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9. A hybridoma that produces the monoclonal antibody of claim 4.

5 10. The hybridoma of claim 9 having the identifying characteristics of a hybridoma cell line selected from the group consisting of SEAM-2 (ATCC No. CRL-12380), SEAM-3 (ATCC No. HB-12170), SEAM-12 (ATCC No. HB-12169), and SEAM-18 (ATCC No. CRL-12381).

10 11. A method for isolating a molecular mimetic of a unique epitope of *Neisseria meningitidis* serogroup B (MenB), said method comprising:

(a) providing a population of molecules comprising a putative molecular mimetic of a unique  
15 epitope of MenB;

(b) contacting said population of molecules with the antibody of claim 1 under conditions that allow immunological binding between said antibody and said molecular mimetic, if present, to provide a complex; and

20 (c) separating the complexes from non-bound molecules.

25 12. The method of claim 11 wherein said population of molecules comprises a peptoid library.

13. The method of claim 11 wherein said population of molecules comprises a peptide library.

30 14. The method of claim 11 wherein said population of molecules comprises a phage-display library.

35 15. A molecular mimetic of a unique epitope of *Neisseria meningitidis* serogroup B (MenB), wherein said mimetic is isolated using the method of claim 11.

16. A molecular mimetic of a unique epitope of *Neisseria meningitidis* serogroup B (MenB), wherein said mimetic is comprised of an anti-idiotypic antibody molecule produced using the antibody molecule of claim 1.

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17. A molecular mimetic of a unique epitope of *Neisseria meningitidis* serogroup B (MenB), wherein said mimetic is comprised of a peptide having an amino acid sequence that is substantially homologous to a sequence selected from the group consisting of SEQ ID NOS. 1-66, and SEQ ID NO. 67.

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18. The mimetic of claim 17, wherein said mimetic is comprised of a peptide having an amino acid sequence that is substantially homologous to SEQ ID NO. 8.

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19. A vaccine composition comprising a unique epitope of *Neisseria meningitidis* serogroup B (MenB) in combination with a pharmaceutically acceptable excipient.

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20. A vaccine composition comprising a molecular mimetic of a unique epitope of *Neisseria meningitidis* serogroup B (MenB) in combination with a pharmaceutically acceptable excipient.

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21. The vaccine composition of claim 20, wherein the molecular mimetic comprises an anti-idiotypic antibody molecule.

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22. The vaccine composition of claim 20, wherein the molecular mimetic comprises a nucleic acid molecule.

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23. The vaccine composition of claim 20,  
wherein the molecular mimetic comprises a peptide  
molecule.

5           24. The vaccine composition of claim 23,  
wherein the peptide molecule has an amino acid sequence  
that is substantially homologous to a sequence selected  
from the group consisting of SEQ ID NOs. 1-66, and SEQ ID  
NO. 67.

10           25. The vaccine composition of claim 19,  
wherein said epitope is covalently bound to a carrier  
molecule.

15           26. The vaccine composition of claim 20,  
wherein said molecular mimetic is covalently bound to a  
carrier molecule.

20           27. The vaccine composition of claim 23,  
wherein said peptide molecule is covalently bound to a  
carrier molecule.

25           28. The vaccine composition of claim 19  
further comprising an adjuvant.

29. The vaccine composition of claim 20  
further comprising an adjuvant.

30           30. A method for preventing *Neisseria*  
*meningitidis* serogroup B and/or *E. coli* K1 disease in a  
mammalian subject, said method comprising administering  
an effective amount of the vaccine of claim 19 to said  
subject.

31. A method for preventing *Neisseria meningitidis* serogroup B and/or *E. coli* K1 disease in a mammalian subject, said method comprising administering an effective amount of the vaccine of claim 20 to said  
5 subject.

32. A method for preventing *Neisseria meningitidis* serogroup B and/or *E. coli* K1 disease in a mammalian subject, said method comprising administering  
10 an effective amount of the vaccine of claim 23 to said subject.

33. A pharmaceutical composition comprising an antibody according to claim 1 in combination with a  
15 pharmaceutically acceptable vehicle.

34. A method for treating or preventing *Neisseria meningitidis* serogroup B and/or *E. coli* K1 disease in a mammalian subject, said method comprising  
20 administering an effective amount of the pharmaceutical composition of claim 33 to said subject.

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